

Notice of Allowability

Application No.

10/073,029

Applicant(s)

TANAKA ET AL.

Examiner

Art Unit

Nhan T. Le

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/21/2006.
2. ☒ The allowed claim(s) is/are 11-24.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Larry Anagnos 05/03/2006.

2. The application has been amended as follows:

In the claims:

Claim 15, page 13, line 5, change "second gain/bias adjuster" to
--first gain/bias adjuster--.

Allowable Subject Matter

Claims 1-24 are allowed over the prior art.

The following is an examiner's statement of reasons for allowance:

As to claim 15, Baldwin (US 2002/0042256) teaches a direct-conversion transmitting circuit, characterized by local modulation circuit comprising first and second mixers (see fig. 2, numbers 223, 225, page 6, paragraphs 0046-0047), first and second low-pass filters (see fig. 2, numbers 219, 221, page 5, paragraph 0025), and a first phase shifter (see fig. 2, number 227, page 6, paragraph 0046), wherein high frequency output terminals of the first and second mixers are connected to each other (see fig. 2, number 223, paragraphs 0045-0047); an output terminal of the first filter is connected to

Art Unit: 2618

an input terminal of the first mixer; a first output terminal of the first phase shifter is connected to a local signal input terminal of the first mixer; a second output terminal of the first phase shifter is connected to a local signal input terminal of the second mixer (see fig. 2, numbers 227, 219, 221, pages 5, 6, paragraphs 0045-0047); and input signals are applied to an input terminals (see page 5, paragraphs 0045-0047), respectively. Murphy et al (US 7,024,172) teaches direct conversion receiver using dither local oscillator to mitigate adjacent channel coherent interference comprising LPFs connected to the attenuators (see fig. 3, numbers 305i, 305q, 308i, 308q, col. 1, lines 53-67, col. 2, lines 1-3). Yochem (US 2002/0137487) teaches a gain/bias adjustment mean which are connected to the filter (see fig. 1, number 106, page 2, paragraphs 0019-0020) wherein the inputs are applied to the input terminal, the input terminal of the low-pass filter is connected to an output terminal of the gain/bias adjustment mean. The teaching of these prior arts either combine or alone fails to teach wherein an input signal generated from an output signal of a first AD converter is applied to an input terminal of the first gain/bias adjuster to reduce difference in gain and bias levels between an input signal of the first mixer and an output signal of the first AD signal of the first AD converter and wherein an input signal generated from an output signal of a second AD converter is applied to an input terminal of the second gain/bias adjuster to reduce difference in gain and bias levels between an input signal of the second mixer and an output signal of the second AD converter.

Dependent claims 16-24 are allowed for the same reason.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Le whose telephone number is 571-272-7892. The examiner can normally be reached on 08:00-05:00 (Mon-Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

N. Le

Nhan Le

Nguyen Vo
5-14-2006

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PRIMARY EXAMINER